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HOW ATTRIBUTES OF THE FEEDBACK MESSAGE AFFECT SUBSEQUENT FEEDBACK SEEKING: THE INTERACTIVE EFFECTS OF FEEDBACK SIGN AND TYPE

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In the current study, we examined the interactive effects of feedback type and sign on feedback-seeking behaviour, as well as the moderating role of regulatory focus. Using a behavioural measure of feedback seeking, we demonstrated a strong interaction between feedback type and sign, such that individuals subsequently sought the most feedback after they were provided with negative process feedback. Additionally, results suggested that an individual's chronic regulatory focus has implications for his or her feedback seeking behaviour. Overall, our results emphasised the value of negative process feedback, which arguably provides the most diagnostic information for behaviour adjustment and performance improvement.

Research and everyday experience demonstrate the value of feedback in helping individuals gain insight into the effectiveness or shortcomings of their performance – in the workplace, the classroom, or even on the ballfield. Despite the valuable information that can be provided through feedback, research has found variable effects of feedback on subsequent performance and motivation (e.g., Kluger & DeNisi, 1996). Individuals actively seek feedback that can guide them to better performance; developing a better understanding as to why people seek positive or negative feedback is important to delineate feedback's motivational effects. A number of researchers have introduced theories regarding the role of feedback sign (i.e., positive or negative feedback), yet this research as a whole has provided inconsistent conclusions (Kluger & DeNisi, 1996). Overall, further research is needed to enhance our understanding of the role that feedback sign plays in feedback seeking (VandeWalle, 2003).

Taking feedback type into consideration may offer additional insights on the effect of feedback sign. Whereas outcome feedback merely provides gen-

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eral success or failure information to the recipient, process feedback offers more diagnostic information regarding actual performance behaviours and typically some information about strengths and weaknesses (Earley, Northcraft, Lee, & Lituchy, 1990). Crossing feedback sign with feedback type to produce four unique types of feedback messages may provide deeper insight into the role of feedback sign on feedback seeking behaviour. Specifically, each of these sign by type combinations provides information of a slightly different nature; outcome feedback provides very general "success" or "failure" information (depending on the sign), while process feedback provides information about specific performance-related elements.

The present research examines the interactive effects of feedback sign (positive vs. negative) and feedback type (outcome vs. process) on subsequent feedback seeking behaviour. Given that feedback often contains both outcome and process components (Earley et al., 1990), it is important to understand how each type of feedback differentially influences feedback seeking behaviour. Therefore, we begin with a brief review of literature that is relevant to feedback seeking and the feedback "message", followed by hypotheses regarding the interactive effect of feedback sign and type on feedback seeking behaviour. In examining the interactive role of feedback sign and type, we attempt to respond directly to other authors' calls for more empirical work on the influence of *specific features* of feedback on feedback seeking behaviour (Park, Schmidt, Scheu, & DeShon, 2007; VandeWalle, 2003).

The current paper also seeks to enhance our understanding of the role of stable individual differences in feedback seeking behaviour, yet another domain in which there is a need for additional research (VandeWalle, 2003). Specifically, we consider the moderating role of individual differences in motivational orientation – chronic regulatory focus – in the relationship between feedback type and sign. To that end, we provide an overview of the role of regulatory focus and present a hypothesis regarding the complex relationship between feedback sign, type, and regulatory focus.

Feedback seeking

Historically, the feedback literature has argued that feedback is primarily a managerial resource that serves to motivate, direct, and instruct the performance of employees. Ashford and Cummings (1983) recognised a shift in perspective from viewing feedback not only as an organisational resource, but as an individual resource as well. They indicated that individuals are not merely passive recipients of feedback, but also active seekers. Given both of these perspectives, it is important to note that the more inclined subordinates are to actively seek feedback, the more of an opportunity management has to

guide employee behaviour.

A considerable amount of the feedback seeking literature in the past twenty years is based on the model of feedback seeking behaviours proposed by Ashford and Cummings (1983). According to this model, feedback is a resource that is available to individuals in the work environment and serves to provide information about how well one is accomplishing both individual and organisational goals and objectives. According to Ashford (1986), feedback also provides individuals with insight into how others perceive and assess their behaviour. The importance an individual places on these goals, objectives, and perceptions determines the value of the feedback to that individual. It is clear that there are a number of factors that influence the extent to which one seeks feedback.

Therefore, investigating and understanding the factors that influence one's propensity to seek feedback is likely to have positive consequences for today's organisations. Although some research has indicated that there are inconsistent results regarding the positive effect of feedback on performance (Kluger & DeNisi, 1996), there is also a large quantity of literature stating that feedback provides employees with vital information regarding the quality of their performance. For example, Renn and Fedor (2001) found that seeking feedback enhanced performance by facilitating the establishment and achievement of goals.

Given the contention that feedback is also an individual resource, it is important to understand when and why individuals engage in feedback seeking behaviour. Recent research (Park et al., 2007) has grouped the antecedents of feedback seeking into two overarching categories: individual dispositions and the perceived costs and values of seeking feedback. While our knowledge of both categories is growing, much research is still needed regarding certain antecedents. For example, Park and colleagues (2007) contend that individuals may be more inclined to seek a certain type of feedback over others. The current paper builds on this contention by examining the influence of feedback sign and type on feedback seeking. In doing so, we contribute to our understanding of the latter category of antecedents. Presumably, feedback seekers may find more value in one combination of feedback type and sign, thereby leading to more feedback seeking for that kind of feedback message. By examining the role of regulatory focus as well, the current paper also contributes to the former category of feedback seeking antecedents: individual dispositions. Before expanding on the role of regulatory focus, we discuss elements of the feedback message in greater detail.

Feedback message

Feedback messages can take on a variety of forms. The current study focuses specifically on the attributes of feedback sign (positive and negative) and feedback type (process and outcome), and how feedback messages affect subsequent feedback seeking. Kluger and DeNisi (1996) indicated that feedback sign has not been found to affect feedback-seeking motivation in a consistent manner. Self-efficacy theorists (Bandura, 1986) would argue that feedback recipients feel reinforced by positive feedback and demonstrate enhanced future performance as a result. However, research has demonstrated that recipients of unfavourable feedback may actually *appreciate* that feedback (Steelman & Rutkowski, 2003). From a diagnostic perspective, accurate and constructive negative feedback can help individuals identify areas for behaviour change that will help improve performance. Control theorists (Carver & Scheier, 1998) suggest that negative feedback allows individuals to identify discrepancies between their actual and desired performance. Negative performance- or behaviour-focused feedback provides valuable information for aligning actual and desired performance. One aim of our research is to help clarify when positive and negative feedback lead to feedback seeking by crossing feedback sign with the *type* of message.

Earley and colleagues (1990) distinguished between two different types of feedback: outcome and process. They defined outcome feedback as feedback that indicates performance results and process feedback as information regarding the manner in which an individual goes about attaining those results. Since outcome feedback is primarily evaluative, it only allows for assessment of one's performance; it does not provide specific direction for improvement. Process feedback, on the other hand, provides more diagnostic information regarding specific aspects of one's performance, which provides direction for future performance and goal attainment. Therefore, individuals should be more interested in process feedback because it provides information on how they can reach their goal.

In practice, feedback usually contains both outcome and process components. Overall, however, outcome feedback is not as informative as process feedback. Because outcome feedback addresses only the results of one's behaviour, it does not provide the recipient with specific information about how to adjust behaviour to improve subsequent results (Earley et al., 1990). Process feedback, on the other hand, provides informational cues about one's performance – such as direction and diagnostics – as it focuses on the behaviours that generate outcomes (Earley et al., 1990). In fact, individuals who only receive outcome feedback may make inappropriate behavioural adjustments. In order to facilitate performance, it is better to know exactly what one is doing well or doing poorly, as opposed to knowing only that one has

succeeded or failed.

We propose that feedback sign and type will interact to affect individuals' subsequent feedback seeking, such that individuals will seek the most feedback when they receive negative process feedback. Following from a control theory perspective, this combination (negative process) leads to more feedback seeking than the other three combinations (i.e., positive process, positive outcome, or negative outcome feedback) because it provides the most specific and directive information for behaviour change. Negative process feedback tells recipients precisely which aspects of their performance need to be targeted for improvement. Individuals who receive this type of feedback will be more likely to seek additional feedback because this type of feedback is perceived as valuable, prescriptive information. Additionally, from a self-efficacy perspective, we expect that individuals who receive positive outcome feedback will engage in more subsequent feedback seeking than those who receive either negative outcome or positive process feedback. Positive outcome feedback informs recipients that their overall performance is desirable, thereby reinforcing their behaviour. Receiving this type of feedback should lead recipients to seek more feedback in the future, as they desire further reinforcement. Therefore, the hypotheses regarding the interaction of feedback type and feedback sign are as follows:

Hypothesis 1: Feedback sign and feedback type will have an interactive effect on subsequent feedback seeking, such that (a) individuals will seek the most feedback when they receive negative process feedback and that (b) individuals will seek more feedback when they receive positive outcome feedback, compared to either negative outcome or positive process feedback.

In addition to the attributes of the feedback message, it is also important to consider individual differences that contribute to feedback seeking behaviour. The current study explores one such individual difference: regulatory focus orientation. Our research aims to strengthen the existing literature by examining the interactive effect of regulatory focus orientation and feedback sign on feedback seeking behaviour. Extant literature regarding this relationship has focused primarily on outcome rather than process feedback. We consider the role of process feedback and how this type of feedback may alter the relationship between regulatory focus and feedback seeking behaviour.

Regulatory focus and feedback seeking

As noted previously, individual differences or dispositions comprise an important group of antecedents to feedback seeking behaviour (Park et al., 2007). Previous research has investigated, among other things, the role of individual goal orientation (Park et al., 2007; VandeWalle, 2003), public self-

consciousness (Levy, Albright, Cawley, & Williams, 1995) and regulatory focus (Förster, Grant, Idson, & Higgins, 2001; Van-Dijk & Kluger, 2004). In the current paper we investigate the contributions of regulatory focus. Given that regulatory focus has important implications for motivation (Higgins, 2000), we anticipate that regulatory focus plays a valuable role in feedback seeking behaviour. In particular, we suspect that chronic regulatory focus interacts with the feedback message, which is comprised of one of four sign by type combinations. This interaction, in turn, influences subsequent feedback seeking behaviour.

An individual's chronic regulatory focus can be described in terms of promotion and prevention orientations. In a *promotion regulatory focus* individuals approach a match to their desired end-state, generally an ideal self-state (Higgins, 2000), making them especially sensitive to the presence or absence of positive stimuli and positive outcomes as they naturally strive toward success. Conversely, a *prevention regulatory focus* is one in which an individual strives to avoid a mismatch to his or her desired end state, typically an ought self-state. This self-regulatory strategy makes individuals alert to the presence or absence of negative stimuli and negative outcomes, and naturally sensitive to information and opportunities that present a barrier to goal attainment (Freitas, Liberman, Salovey, & Higgins, 2002; Higgins, 2000). Thus, different individuals can pursue the same overall goals while employing different orientations and means (Higgins, 2000).

Förster and colleagues (2001) found that the motivational effects of positive and negative feedback were moderated by chronic regulatory focus. Van-Dijk and Kluger (2004) found converging evidence by looking at success and failure feedback. Both studies found that prevention oriented people were more motivated following negative (failure) feedback and that promotion oriented people were more motivated following positive (success) feedback. Since prevention oriented individuals are more sensitive to negative information (Higgins, 1997; 2000), it follows that they would be more motivated by this type of feedback. Along the same lines, promotion oriented individuals are more attuned to positive stimuli (including feedback). These previous findings suggest that regulatory focus plays a particularly interesting role in influencing motivation.

Whereas it has been consistently found that promotion oriented people are motivated by positive feedback and prevention oriented people are motivated by negative feedback, it is important to recognise that these studies have only examined 'outcome' feedback. As promotion oriented individuals have a desire for growth and self-direction and also continually strive for success, these individuals may be more interested in seeking negative process feedback as it provides information about what one is doing poorly and highlights specific areas for improvement. We argue that individuals with a promotion

focus will be more inclined to seek negative feedback when it is of a process nature, because negative process feedback provides the most diagnostic information. However, when feedback is merely outcome oriented, these individuals should be more inclined to seek positive feedback (Förster et al., 2001; Van-Dijk & Kluger, 2004).

Prevention oriented people may not seek feedback differentially following process or outcome feedback. Norris-Watts and Levy (2006) found that prevention oriented people sought the least feedback when it was incongruent with their regulatory focus (positive feedback). It may be that prevention oriented individuals do not know what to do with positive feedback because they are sensitive to negative stimuli that provides information on how to avoid losses. To prevention oriented people, responsibility and security are more important than self-growth. Thus, they should want negative feedback, regardless of whether it is of a process or outcome nature.

Given that previous research (Förster et al., 2001; Van-Dijk & Kluger, 2004) has demonstrated that regulatory focus is an important factor in influencing feedback seeking, we suggest that regulatory focus could also play a role in the potential interactive effect of feedback sign and type on subsequent feedback seeking. Specifically, we anticipate that an individual's chronic regulatory focus will either enhance or attenuate the effect of the feedback message on subsequent feedback seeking. In other words, the interactive effect of feedback sign and type on feedback seeking outlined in Hypothesis 1 will be stronger when individuals have a chronic promotion orientation. Because promotion-oriented individuals are motivated by successes, they should find negative process feedback to be the most informative and directive, and therefore the most valuable. As a result, promotion-oriented individuals should be more likely to seek subsequent feedback when they receive only negative process feedback messages. Likewise, the effect of this interaction on feedback seeking will be less pronounced for individuals with a chronic prevention orientation, as they may be less inclined to prefer one type of feedback over the other (Norris-Watts & Levy, 2006), but generally prefer negative feedback over positive. Thus, we expect that prevention-oriented individuals will seek more feedback when provided with negative as opposed to positive feedback, regardless of type.

Hypothesis 2: Chronic regulatory focus will moderate the interactive effect of feedback sign and type on subsequent feedback seeking, such that a promotion orientation enhances the effect and a prevention orientation attenuates the effect.

Method

Participants

Participants included 137 undergraduate students at a North American University currently enrolled in Introductory Psychology classes. Students received extra credit points in exchange for their participation. The mean age of participants was $M = 20.7$ ($SD = 5.17$) and approximately 67% of participants were female. Additionally, 73% of participants were employed at least part time and 77% of participants identified themselves as white or Caucasian.

Procedure

Upon arrival at the lab, participants were randomly assigned to one of the four feedback conditions. Participants completed informed consent forms and were told that the purpose of the study was to pilot test a new time management program. After being seated at the computer, participants were presented with a demographic questionnaire followed by a measure of regulatory focus. Next, subjects began the time management task (Levy et al., 1995). All instructions were presented on the computer, however, the researcher verbally made each participant aware of the opportunity to seek feedback by clicking on the appropriate button. Participants then completed six weeks worth of time on the time management task. Finally, participants were thanked, debriefed, and awarded extra credit points in their current psychology class.

Time management task

A time-management computer task provided our behavioural measure of feedback seeking (Levy et al., 1995). In the time management task, participants scheduled 24-hours worth of activities for an entire week, one week at a time for a total of six weeks (trials). Participants were given several goals, requirements, and constraints that had to be taken into consideration during the planning of each week. Types of activities included working a part-time job, completing chores, doing homework, and socialising. At the end of each weekly scheduling, participations could request feedback about how effectively they were managing their time. Participants were assigned to one of four conditions, which determined the type of feedback messages they would receive: 1) positive process feedback, 2) negative process feedback, 3) positive outcome feedback, and 4) negative outcome feedback. It is important to

note that all participants automatically received feedback after an initial "practice" week, thereby ensuring that all participants were placed into their respective conditions. These conditions determined which of the four types of feedback participants would receive each time they sought feedback. For example, participants assigned to the positive process condition received *only* positive process feedback throughout the course of the experiment.

Outcome feedback provided very general information regarding whether the participant successfully or unsuccessfully completed the task. Examples of positive and negative outcome feedback, respectively, include: "Well done! You have successfully managed your time this week. Your performance indicates that your ability to manage your time is superior to that of 75% of other undergraduates", and "Uh-oh! You have scheduled your time poorly this week. Your performance is in the 30th percentile relative to other undergraduates". On the other hand, process feedback provided more specific information regarding the amount of time a participant allotted to certain activities. For example, positive and negative process feedback would include: "Your apartment is clean and your laundry is done! You dedicated just the right amount of time to chores this week. Well done!" and "While we all need some downtime, you are scheduling way too much time for relaxing and watching TV".

We operationalized feedback-seeking behaviour as the aggregate number (out of six opportunities to seek feedback) of direct inquiries one requested from the computer. Feedback seeking was behaviourally measured by whether the subject selected the 'seek feedback from researcher' button or the 'continue' (e.g., bypassing feedback) button.

Additional measures

Regulatory focus

Regulatory focus was assessed using Lockwood, Jordan, and Kunda's (2002) 18-item measure comprised of two subscales: prevention (α = .77) and promotion (α = .80). Items were rated on a 9-point scale, where 1 = not at all true of me and 9 = very true of me. The items were adapted to refer to an academic setting. Sample items include: "I frequently imagine how I will achieve my hopes and aspirations" (promotion) and "My major goal at work (in school) right now is to avoid becoming an academic failure" (prevention).

Manipulation check

Two three-item scales were developed to assess participants' perceptions of the feedback that they received. Specifically, participants responded to three questions concerning the sign of the feedback they received (positive vs. negative) and three questions concerning the type of feedback they received (outcome vs. process). Responses to the three sign questions were combined to form an overall scale score for feedback sign. Likewise, the three type questions were combined to produce an overall scale score for feedback type. Scales were coded such that higher scores should correspond to positive (sign) and outcome (type) feedback. Each scale had one reverse-coded item. Sample items included: "In general the feedback I received focused on the amount of time I spent on specific activities for the week" (type – process feedback conditions) and "In general the feedback I received indicated very good performance" (sign – positive feedback conditions).

Results

Our manipulation check indicated that participants perceived the feedback they received to be in the intended direction and of the appropriate type for their respective conditions. ANOVAs were used to assess mean differences across conditions for each of these two scale scores. Regarding feedback sign, we found a significant difference in means across the positive (M = 17.34, SD = 3.29) and negative (M = 10.13, SD = 4.07) conditions (collapsed across feedback type), such that F = 114.42, η^2 = .50, $p < .01$. Similarly, means for feedback type scores in the outcome (M = 12.88, SD = 2.35) and process (M = 10.06, SD = 3.14) conditions were significantly different, such that F = 26.12, η^2 = .21, $p < .01$. These significant differences indicate that our manipulations were both successful and robust.

Results indicated that 66% of participants sought feedback at least once, confirming that the majority of participants were interested in receiving feedback. The majority of feedback seeking occurred during the first week when participants faced the most uncertainty regarding their performance. These results are consistent with previous research (i.e., Levy et al., 1995).

Hypothesis 1 proposed an interactive effect of feedback sign and type on subsequent feedback seeking. Results of an ANOVA revealed no main effects for either feedback sign or type, but a significant interaction (F(3, 132) = 6.61, p = .01, η^2 = .05) between feedback type and sign in predicting subsequent feedback seeking (see Table 1). Specifically, Hypothesis 1a proposed that individuals would seek the most subsequent feedback following the receipt of negative process feedback, whereas Hypothesis 1b proposed that

individuals receiving positive outcome feedback would seek more feedback than those who received either negative outcome or positive process feedback (see Figure 1). As predicted, individuals receiving negative process feedback sought more feedback (M = 4.45, SD = 2.48) than those receiving positive outcome (M = 3.86, SD = 2.61), negative outcome (M = 3.15, SD = 2.31), or positive process (M = 3.03, SD = 2.26) feedback. Planned comparisons were used to determine whether or not these means were significantly different, lending partial support for Hypotheses 1a and 1b. While individuals who received only negative process feedback did seek the most feedback of any condition (H1a), this difference was significant for two of the three other conditions: negative outcome and positive process feedback (mean dif-

Table 1
Results of ANOVA predicting subsequent feedback seeking

Source	SS	*df*	MS	*F*	η^2
Feedback Sign	4.34	1	4.34	.74	.01
Feedback Type	1.96	1	1.96	.33	.00
Sign x Type Intx	38.74	1	38.74	6.61**	.05**
Error	773.70	132	5.86		
Total	818.74	135			

Note. R^2 = .05, ** p < .01

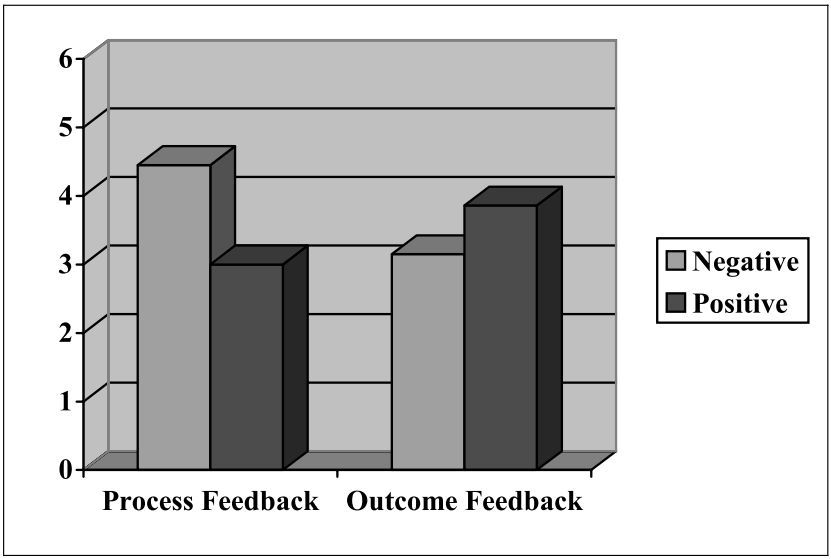

Figure 1
The interactive effect of feedback sign and type on subsequent feedback seeking

ferences of 1.31, $p < .05$ and 1.43, $p < .05$, respectively). Because the difference in feedback seeking was significantly different for only these two conditions, and not all three conditions (not the positive outcome condition, with a mean difference of .60, $p > .05$), hypothesis 1a was partially supported. Despite only partial support, the significant mean differences in feedback seeking between negative process and negative outcome and positive process feedback are substantial and meaningful. Regarding hypothesis 1b, although the means were in the expected direction, planned contrast comparisons indicated that the means differences in feedback seeking between the positive outcome condition and the negative outcome and positive process conditions (mean differences of .71, $p > .05$ and .83, $p > .05$, respectively) were non-significant. Thus, hypothesis 1b was not supported.

Hypothesis 2 proposed that regulatory focus moderates the interaction of feedback sign and type on subsequent feedback seeking behaviour. We anticipated that the interactive effect of feedback sign and type on feedback seeking could be enhanced for promotion oriented individuals, such that they subsequently seek the most feedback following the receipt of negative process feedback. Additionally, we expected that this interaction might be attenuated for prevention-oriented individuals, such that they subsequently seek more feedback following the receipt of negative feedback regardless of type (outcome vs. process).

To maintain the integrity of the continuous moderator (regulatory focus), we used moderated regression as opposed to ANOVA to test this hypothesis. Two three-way interactions were used to test this hypothesis. In the first regression model, feedback type, feedback sign, and promotion orientation were entered as step 1. Step 2 included these variables, as well as three interaction terms: feedback type x sign, feedback type x promotion[1], and feedback sign x promotion. Finally, the three-way interaction term (feedback type x sign x promotion) was entered in step 3. The second regression model was the same, except for the use of prevention scores in the place of promotion scores. Contrary to our expectations, neither model significantly predicted feedback seeking. Specifically, the three-way interaction with promotion was not significant ($\beta = -.81$, $p > .05$), nor was the three-way interaction with prevention ($\beta = -1.17$, $p > .05$). These results can also be found in tables 2 and 3.

[1]Promotion and prevention scores were centred for regression analyses.

Table 2
Results of moderated regression analyses predicting subsequent feedback seeking with feedback sign, type, and promotion orientation

Independent Variables	β	R^2	$R^2\Delta$
Step 1			
Feedback Type	.07		
Feedback Sign	.05		
Promotion	-.20*	.05†	.05†
Step 2			
Feedback Type x Sign Intx	1.08**		
Feedback Type x Promotion Intx	-.05*		
Feedback Sign x Promotion Intx	-.43	.12*	.07*
Step 3			
Sign x Type x Promotion Intx	-.81	.13*	.01

Note. *$p < .05$, ** $p < .01$, † $p < .10$; feedback sign coded as 0 = positive, 1 = negative; feedback type coded as 0 = outcome, 1 = process.

Table 3
Results of moderated regression analyses predicting subsequent feedback seeking with feedback sign, type, and prevention orientation

Independent Variables	β	R^2	$R^2\Delta$
Step 1			
Feedback Type	.05		
Feedback Sign	.07		
Prevention	-.04	.01	.01
Step 2			
Feedback Type x Sign Intx	.83**		
Feedback Type x Prevention Intx	.54*		
Feedback Sign x Prevention Intx	-.17	.09*	.08*
Step 3			
Sign x Type x Prevention Intx	-1.17	.10*	.01

Note. *$p < .05$, ** $p < .01$; feedback sign coded as 0 = positive, 1 = negative; feedback type coded as 0 = outcome, 1 = process.

Although the hypothesised three-way interaction was non-significant, one two-way interaction was significant. Feedback type and prevention orientation had an interactive effect on feedback seeking, such that individuals with a higher prevention score were more likely to seek subsequent feedback when they received only outcome feedback, whereas individuals with a lower prevention score were more likely to seek subsequent feedback when they received only process feedback. This unanticipated effect inspired us to further investigate the role of regulatory focus on feedback seeking. We ran additional regression analyses using regulatory focus as the independent variable and feedback seeking as the dependent variable for our four distinct conditions separately. In essence, we were interested in examining the role of

regulatory focus in each unique combination of feedback sign and type. Two noteworthy effects of regulatory focus were uncovered. First, in line with the aforementioned interaction between prevention orientation and feedback type, we found a positive relationship between prevention orientation and feedback seeking in the positive process feedback condition (R^2 = .13, β = .36, p < .05). This effect suggests that individuals with a higher prevention score are more likely to seek subsequent feedback when they receive only positive process feedback. Additionally, and also contrary to our expectations, we discovered a negative relationship between promotion orientation and feedback seeking for individuals in the negative process feedback condition (R^2 = .21, β = -.45, p < .01). This effect suggests that individuals with a higher promotion orientation are less likely than those with a lower promotion orientation to seek subsequent feedback when they receive only negative process feedback.

Discussion

As expected, we found support for the interactive effect of feedback sign and type for predicting subsequent feedback seeking behaviour. Overall, individuals sought the most feedback when they received negative process feedback. Additionally, individuals who received positive outcome feedback sought more subsequent feedback than did those who received either negative outcome or positive process feedback.

Our results primarily provide support for the value of negative process feedback. Negative process feedback identified specific information that can be used for improvement following knowledge of poor performance by highlighting particular areas and directions for behavioural adjustment. These results are in accord with a control theory perspective (Carver & Scheier, 1998), which suggests that negative feedback provides diagnostic information for aligning actual performance with desired performance or goals. Future research should continue to look for other factors, such as situational and individual difference variables, which contribute to the desire to seek negative process feedback.

In addition, the sign by type interaction indicated that participants sought positive outcome feedback second most frequently, following negative process feedback. Positive outcome feedback provides the recipient with a general positive evaluation. Overall, this finding suggests that people like to hear that they are performing well. Positive feedback provides a sense of encouragement, recognition of a job well done, and self-esteem enhancement. It is apparent that positive outcome feedback has it merits and is an important aspect of feedback seeking and feedback interventions. It is note-

worthy, however, that positive *process* feedback was sought the least. Positive process feedback provides little useful information and does not indicate a need for behavioural change. As a result, participants may not have felt a need to continue to seek feedback.

Although the proposed three-way interaction was not supported, two meaningful results emerged regarding the role of regulatory focus. First, we found that promotion-focused individuals were *not* more likely to seek negative process feedback. It is possible that the consistent, specific negative feedback may have been surprising or frustrating to promotion-focused individuals who are achievement oriented, thereby making them less likely to seek subsequent feedback. Although negative process feedback provided specific information to reach their goal, the information was not presented in a way that lines up with the motivation of promotion-oriented individuals. Specifically, promotion-oriented individuals are attuned to positive information. Thus, negative process feedback may not have resonated sufficiently to stimulate feedback seeking.

Second, and contrary to our expectation, we found that prevention-oriented individuals sought more positive process feedback than did promotion-oriented individuals. This contrary result may be explained in terms of self-verification and attempting to avoid failure. Prevention-focused individuals may have sought more positive process feedback because it verified that they were successfully avoiding time-mismanagement. Overall, despite this surprising relationship, positive process feedback was sought the least, most likely because it provides little useful information for improvement by simply informing participants what they are doing well.

Limitations

Despite our encouraging findings, there are a couple limitations that warrant attention. First, although the current study employed a behavioural measure of feedback seeking, our sample was comprised of student participants in a laboratory setting. Thus, feedback seeking did not occur in an actual organisational setting with real context or consequences. When one receives feedback at work, it is embedded within existing relationships and context. Acting or failing to act on feedback has legitimate implications for work performance. Second, our research design was such that participants received *only* process or outcome feedback. It is likely that in an organisational setting, individuals receive a combination of both process and outcome feedback, thereby providing specific information about their performance, as well as an overall evaluation.

With regard to realistic implications, we suggest that a mix of outcome

and process feedback is the most beneficial in organisational contexts for facilitating performance improvement. Negative process feedback provides individuals with the most useful information for altering performance, while positive outcome feedback reassures individuals that their performance is satisfactory overall. Alone, outcome feedback is too black and white, or may even be perceived as "too little too late" if recipients are beyond the point of being able to improve performance. On the other hand, process feedback may have negative implications for motivation if it is presented independently of outcome feedback. In other words, receiving feedback only on specific facets of one's performance may be discouraging without a "big picture" understanding of how well or poorly one is performing. In addition to valuable and prescriptive process feedback, individuals also need to receive an overall evaluation to keep that big picture of performance in sight. Overall, our findings suggest that attributes of the feedback message and individual differences contribute to subsequent feedback-seeking behaviour. Researchers should continue to investigate the role of regulatory focus and other individual differences in feedback seeking, as well as the effects of different feedback attributes, such as type and sign.

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